FILE 'HOME' ENTERED AT 17:07:27 ON 13 AUG 2004

=> fil reg

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'REGISTRY' ENTERED AT 17:07:50 ON 13 AUG 2004

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 11 AUG 2004 HIGHEST RN 725685-10-9
DICTIONARY FILE UPDATES: 11 AUG 2004 HIGHEST RN 725685-10-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 21, 2004

Please note that search-term pricing does apply when conducting SmartSELECT searches.

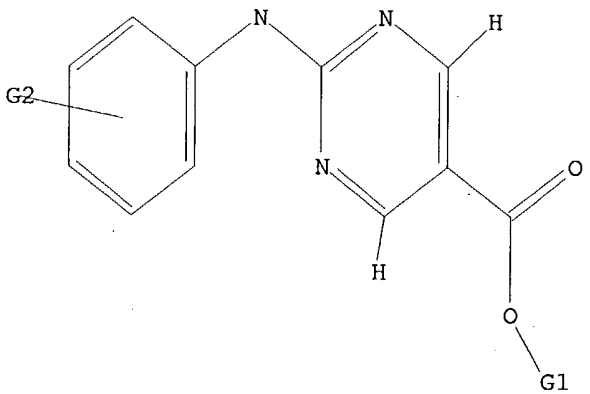
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
http://www.cas.org/ONLINE/DBSS/registryss.html

=>
Uploading C:\Program Files\Stnexp\Queries\926407.str

L1 STRUCTURE UPLOADED

=> d l1
L1 HAS NO ANSWERS
L1 STR



G1 H,Me,Et,n-Pr,i-Pr,n-Bu,i-Bu,s-Bu,t-Bu
G2 H,O,OH,NO2,X

Structure attributes must be viewed using STN Express query preparation.

=> s l1 sss full
FULL SEARCH INITIATED 17:08:30 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 3779 TO ITERATE

100.0% PROCESSED 3779 ITERATIONS 20 ANSWERS
SEARCH TIME: 00.00.01

L2 20 SEA SSS FUL L1

=> file caplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	155.42	155.63

FILE 'CAPLUS' ENTERED AT 17:08:36 ON 13 AUG 2004
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 13 Aug 2004 VOL 141 ISS 8
FILE LAST UPDATED: 12 Aug 2004 (20040812/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> s l2
L3 5 L2

=> d l3 1-5 ibib abs hitstr

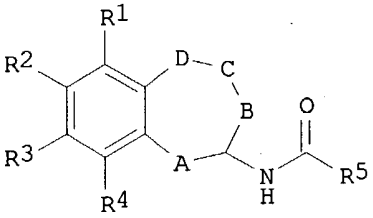
L3 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:637637 CAPLUS
DOCUMENT NUMBER: 137:185325
TITLE: Preparation of acylated 6,7,8,9-tetrahydro-5H-benzocycloheptenylamines as stimulators of endothelial NO-synthase transcription
INVENTOR(S): Strobel, Hartmut; Wohlfart, Paulus
PATENT ASSIGNEE(S): Aventis Pharma Deutschland GmbH, Germany
SOURCE: PCT Int. Appl., 101 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2002064546	A2	20020822	WO 2002-EP1449	20020212
WO 2002064546	A3	20021107		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EE 200300370	A	20031015	EE 2003-370	20020212
EP 1362027	A2	20031119	EP 2002-722069	20020212
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004518720	T2	20040624	JP 2002-564479	20020212
BR 2002007197	A	20040706	BR 2002-7197	20020212
US 2003008915	A1	20030109	US 2002-73203	20020213
US 6759412	B2	20040706		
NO 2003003566	A	20031013	NO 2003-3566	20030812
PRIORITY APPLN. INFO.:			EP 2001-102853 A	20010213
			WO 2002-EP1449 W	20020212

OTHER SOURCE(S): MARPAT 137:185325

GI



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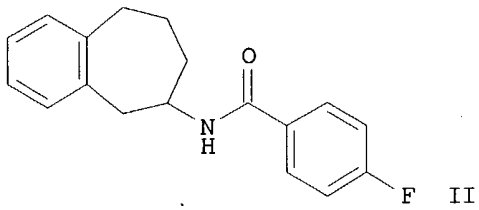


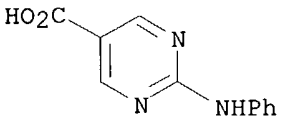
II

AB Title compds. I [wherein R1 and R4 = independently H, (pseudo)halo, CF3, NO2, or (un)substituted alkyl, alkenyl, alkynyl, Ph, heteroaryl, amino, alkoxy, sulfamoyl, etc.; R2 and R3 = independently H, (pseudo)halo, OH, PhO, alkoxy, CF3, CN, NO2, or (un)substituted alkyl, amino, acylamino, etc.; A = CH2, CHOH, or CH(alkyl); B, C, and D = independently CH2 or CH(alkyl); R5 = (un)substituted (hetero)aryl; and stereoisomers, mixts., or pharmaceutically acceptable salts thereof] were prepared as stimulators of endothelial NO-synthase (eNOS) transcription, which has a vasodilating effect and inhibits the aggregation of platelets, the adhesion of leukocytes to the endothelium, and the proliferation of intimal smooth muscle cells. For example, amidation of 4-fluorobenzoic acid chloride with 6,7,8,9-tetrahydro-5H-benzocyclohepten-6-ylamine in the presence of TEA in dioxane afforded II. The latter activated eNOS transcription in primary human umbilical vein cord endothelial cells (HUVEC) with EC50 of 0.02 μM. I are useful for the treatment of cardiovascular diseases, stable or unstable angina pectoris, coronary heart disease, Prinzmetal angina, acute coronary syndrome, heart failure, myocardial infarction, stroke, thrombosis, peripheral artery occlusive disease, endothelial dysfunction, atherosclerosis, restenosis, endothelial damage after PTCA, hypertension, essential hypertension, pulmonary hypertension, secondary hypertension, renovascular hypertension, chronic glomerulonephritis, erectile dysfunction, ventricular arrhythmia, diabetes, diabetes

complications, nephropathy, retinopathy, angiogenesis, asthma bronchial, chronic renal failure, cirrhosis of the liver, osteoporosis, or restricted memory performance or for a restricted ability to learn, or the lowering of cardiovascular risk of postmenopausal women or after intake of contraceptives (no data).

IT **450368-25-9**, 2-(Phenylamino)pyrimidine-5-carboxylic acid
RL: RCT (Reactant); RACT (Reactant or reagent)
(reactant; preparation of acylated tetrahydrobenzocycloheptenylamines as stimulators of endothelial NO-synthase transcription)

RN 450368-25-9 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-(phenylamino)- (9CI) (CA INDEX NAME)



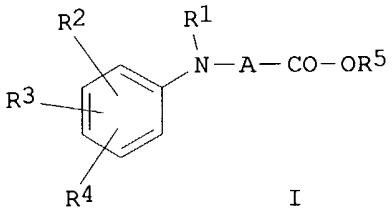
L3 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:790513 CAPLUS
DOCUMENT NUMBER: 133:335245
TITLE: Preparation of heterocyclic carboxylic acid derivatives as retinoid activity regulators and retinoid-like agents
INVENTOR(S): Kagechika, Hiroyuki
PATENT ASSIGNEE(S): Institute of Medicinal Molecular Design. Inc., Japan
SOURCE: PCT Int. Appl., 36 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

applicants

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000066595	A1	20001109	WO 2000-JP2726	20000426
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1180520	A1	20020220	EP 2000-922876	20000426
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				

PRIORITY APPLN. INFO.:	JP 1999-121592	A	19990428
	WO 2000-JP2726	W	20000426

OTHER SOURCE(S): MARPAT 133:335245
GI



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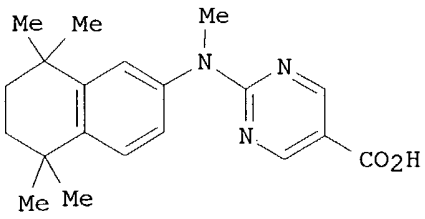


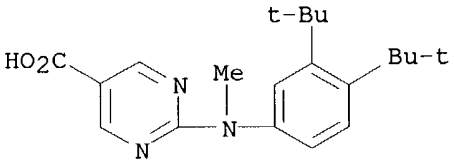
II

AB The title compds. I [R1 is hydrogen, C1-C6 alkyl, C1-C6 alkenyl, or acyl; R2 and R3 are each hydrogen or C1-C6 alkyl, or R2 and R3 adjacent to each other may be united to form a five- to seven-membered ring; R4 is hydrogen, hydroxyl, C1-C6 alkoxy, C1-C6 alkyl, or the like; A is heteroaryldiyl; and R5 is hydrogen or C1-C6 alkyl] are prepared The pyrimidinecarboxylic acid derivative II at 10-6 M caused 81% differentiation of HL-60 cells, vs. 5% differentiation of HL-60 cells in the absence of II.

IT **304431-45-6P 304431-46-7P 304431-47-8P 304431-48-9P**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of heterocyclic carboxylic acid derivs. as retinoid activity regulators and retinoid-like agents)

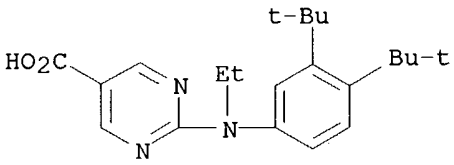
RN 304431-45-6 CAPLUS

CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl]methylamino]- (9CI) (CA INDEX NAME)

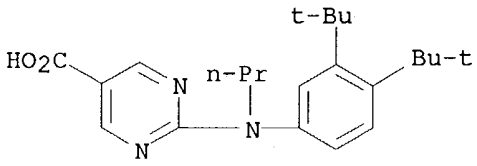


RN 304431-46-7 CAPLUS

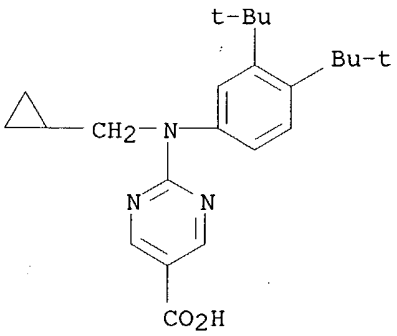
CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl]ethylamino]- (9CI) (CA INDEX NAME)



RN 304431-47-8 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl]propylamino]- (9CI) (CA INDEX NAME)

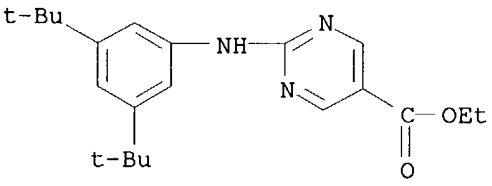


RN 304431-48-9 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl](cyclopropylmethyl)amino]- (9CI) (CA INDEX NAME)

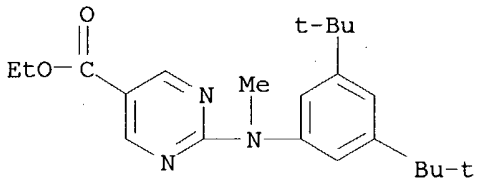


IT **304431-55-8P 304431-56-9P 304431-57-0P**
304431-61-6P 304431-62-7P 304431-63-8P
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation of heterocyclic carboxylic acid derivs. as retinoid activity regulators and retinoid-like agents)

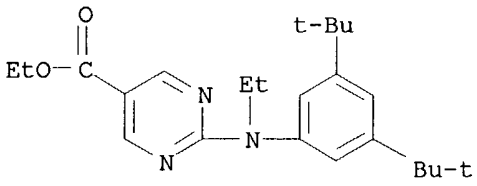
RN 304431-55-8 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



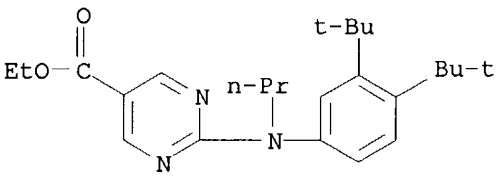
RN 304431-56-9 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl]methylamino]-, ethyl ester (9CI) (CA INDEX NAME)



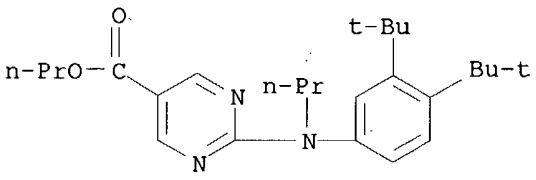
RN 304431-57-0 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl]ethylamino]-, ethyl ester (9CI) (CA INDEX NAME)



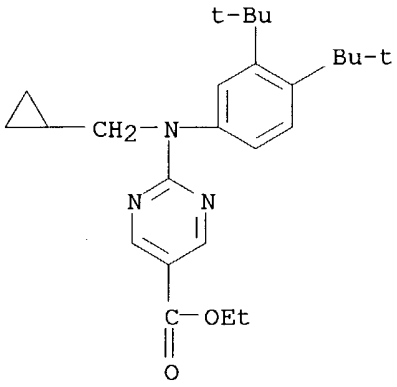
RN 304431-61-6 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl]propylamino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 304431-62-7 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl]propylamino]-, propyl ester (9CI) (CA INDEX NAME)



RN 304431-63-8 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,4-bis(1,1-dimethylethyl)phenyl](cyclopropylmethyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



REFERENCE COUNT: 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2000:734380 CAPLUS
DOCUMENT NUMBER: 134:29571
TITLE: Retinoidal pyrimidinecarboxylic acids. Unexpected diaza-substituent effects in retinobenzoic acids
AUTHOR(S): Ohta, Kiminori; Kawachi, Emiko; Inoue, Noriko; Fukasawa, Hiroshi; Hashimoto, Yuichi; Itai, Akiko; Kagechika, Hiroyuki
CORPORATE SOURCE: Graduate School of Pharmaceutical Sciences, The University of Tokyo, Tokyo, 113-0033, Japan
SOURCE: Chemical & Pharmaceutical Bulletin (2000), 48(10), 1504-1513
CODEN: CPBTAL; ISSN: 0009-2363
PUBLISHER: Pharmaceutical Society of Japan
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 134:29571

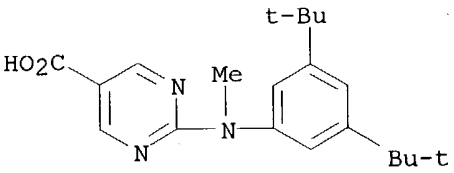
data not good

AB Several pyridine- and pyrimidine-carboxylic acids were synthesized as ligand candidates for retinoid nuclear receptors, retinoic acid receptors (RARs) and retinoic X receptors (RXRs). Although the pyridine derivs., 6-[(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)carbamoyl]pyridine-3-carboxylic acid and 6-[(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)carboxamido]pyridine-3-carboxylic acid are more potent than the corresponding benzoic acid-type retinoids, Am80 and Am580, the replacement of the benzene ring of Am580, Am555, or Am55 with a pyrimidine ring caused loss of the retinoidal activity both in HL-60 cell differentiation assay and in RAR transactivation assay using COS-1 cells. On the other hand, pyrimidine analogs (PA series) of potent RXR agonists (retinoid synergists) with a diphenylamine skeleton (DA series) exhibited potent retinoid synergistic activity in HL-60 cell differentiation assay and activated RXRs. Among the synthesized compds., 2-[N-n-propyl-N-(5,6,7,8-tetrahydro-5,5,8,8-tetramethyl-2-naphthalenyl)amino]pyrimidine-5-carboxylic acid (PA013) is most active retinoid synergist in HL-60 assay.

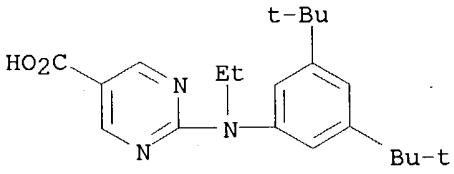
IT **312263-55-1P**, PA 211 **312273-66-8P**, PA 212
312273-68-0P, PA 213 **312273-70-4P**, PA 224
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
(synthesis and retinoidal activity of heterocyclic retinoid analogs)

RN 312263-55-1 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl]methylam

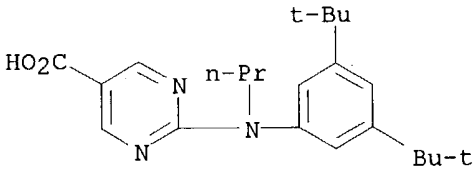
ino]- (9CI) (CA INDEX NAME)



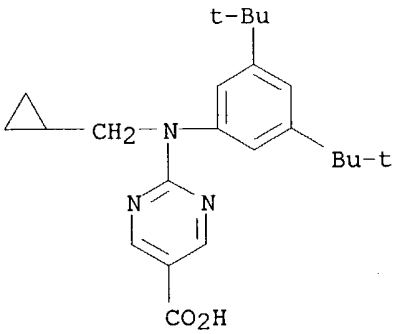
RN 312273-66-8 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl]ethylamino]- (9CI) (CA INDEX NAME)



RN 312273-68-0 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl]propylamino]- (9CI) (CA INDEX NAME)



RN 312273-70-4 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[3,5-bis(1,1-dimethylethyl)phenyl](cyclopropylmethyl)amino]- (9CI) (CA INDEX NAME)

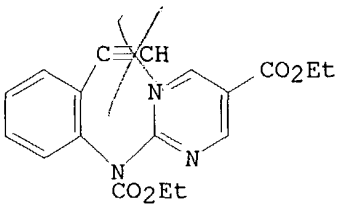


REFERENCE COUNT: 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1993:449269 CAPLUS
DOCUMENT NUMBER: 119:49269
TITLE: An efficient synthesis of α-carboline-3-carboxylic acid, ethyl ester (α-CCE)
AUTHOR(S): Forbes, Ian T.; Johnson, Christopher N.; Thompson, Mervyn
CORPORATE SOURCE: SmithKline Beecham Pharm., Harlow/Essex, CM19 5AD, UK
SOURCE: Synthetic Communications (1993), 23(6), 715-23
CODEN: SYNCAV; ISSN: 0039-7911
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 119:49269

GI



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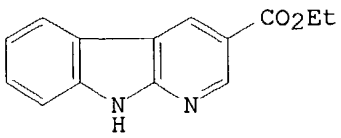
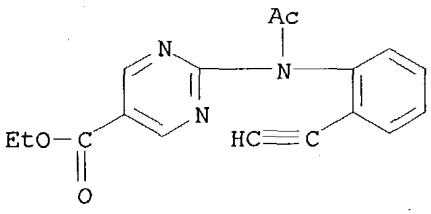


II

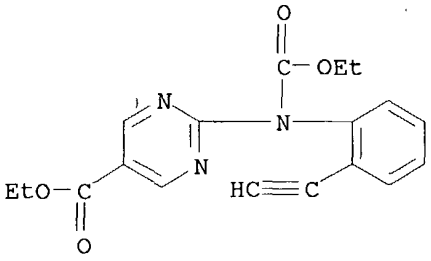
AB The use of the intramol. inverse electron demand Diels-Alder reaction between an acetylenic dienophile and a pyrimidine diene component in I was used in the synthesis of α-CCE (II).

IT **148550-53-2P 148550-54-3P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and intramol. inverse electron demand Diels-Alder reaction of)

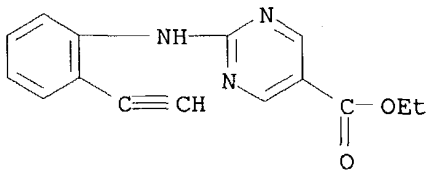
RN 148550-53-2 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[acetyl(2-ethynylphenyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



RN 148550-54-3 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[(ethoxycarbonyl)(2-ethynylphenyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



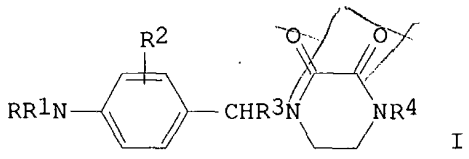
IT **148550-50-9P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 148550-50-9 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[(2-ethynylphenyl)amino]-, ethyl ester (9CI) (CA INDEX NAME)



L3 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1981:407331 CAPLUS
DOCUMENT NUMBER: 95:7331
TITLE: 1-(4-Aminobenzyl)-2,3-dioxopiperazine derivatives and their acid addition salts
PATENT ASSIGNEE(S): Toyama Chemical Co., Ltd., Japan
SOURCE: Ger. Offen., 86 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3027106	A1	19810219	DE 1980-3027106	19800717
DE 3027106	C2	19881110		
JP 56018969	A2	19810223	JP 1979-93234	19790724
JP 05057272	B4	19930823		
CA 1131640	A1	19820914	CA 1980-356116	19800714
GB 2056976	A	19810325	GB 1980-23879	19800722
FR 2461705	A1	19810206	FR 1980-16275	19800723
FR 2461705	B1	19830318		
PRIORITY APPLN. INFO.:			JP 1979-93234	19790724
			CA 1982-356116	19820218

GI

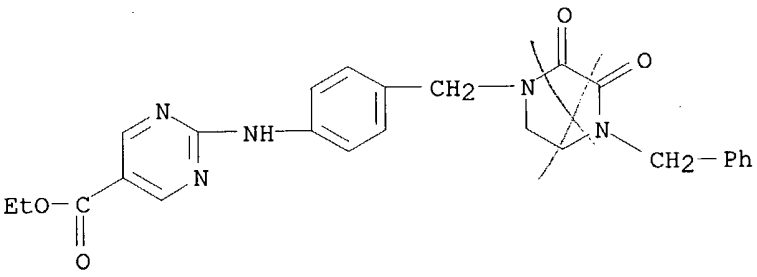


I

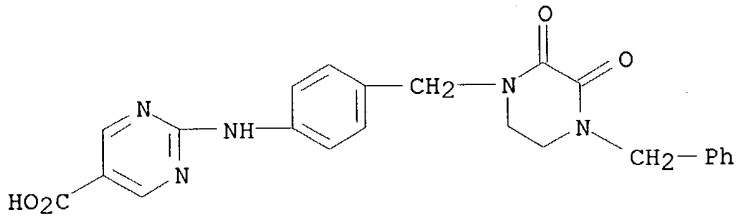
AB Piperazinediones I (R, R1 = H, alkyl, cycloalkyl, aralkyl, acyl, thiocarbamoyl, alkylthioimidoyl, amidino, heterocyclic; NRR1 = heterocyclic; R2 = H, amino, alkyl, alkoxy; R3 = H, alkyl; R4 = H, aliphatic, aryl, heterocyclic) were prepared Thus AcNHCH2CH2NH2 was reductively alkylated with 4-AcNHC6H4CHO to give 4-H2NC6H4CH2NHCH2CH2NH2 which was cyclized with di-Et oxalate to give I (R-R4 = H). The latter compound was treated with 2-bromopyrimidine to give I (R = 2-pyrimidinyl, R1-R4 = H)

which was treated with PhCH2Cl to give I (R = 2-pyrimidinyl, R1-R3 = H, R4 = CH2Ph)(II). II had a min. inhibitory concentration against HeLa cells of 0.1 μg/mL.

IT **77917-17-0**
RL: RCT (Reactant); RACT (Reactant or reagent)
(hydrolysis of)
RN 77917-17-0 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[4-[[2,3-dioxo-4-(phenylmethyl)-1-piperazinyl]methyl]phenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)



IT **77917-18-1P**
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(preparation and reaction of, with benzyl alc. and azide)
RN 77917-18-1 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[4-[[2,3-dioxo-4-(phenylmethyl)-1-piperazinyl]methyl]phenyl]amino]- (9CI) (CA INDEX NAME)



IT **77917-17-0P**
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 77917-17-0 CAPLUS
CN 5-Pyrimidinecarboxylic acid, 2-[[4-[[2,3-dioxo-4-(phenylmethyl)-1-piperazinyl]methyl]phenyl]amino]-, ethyl ester (9CI) (CA INDEX NAME)